

We claim:

1. A substantially purified nucleic acid molecule that encodes a protein comprising the amino acid sequence of SEQ ID NO: 622.
- 5 2. The substantially purified nucleic acid molecule of claim 1, wherein the nucleic acid molecule comprises the nucleic acid sequence of SEQ ID NO: 1.
3. A substantially purified nucleic acid molecule that specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 1 or its complement, wherein the nucleic acid molecule encodes a protein comprising the amino acid sequence of SEQ ID NO: 622.
- 10 4. The substantially purified nucleic acid molecule according to claim 3, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 1 or its complement under high stringency conditions.
5. The substantially purified nucleic acid molecule according to claim 3, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 1 or its complement under low stringency conditions.
- 15 6. A substantially purified nucleic acid molecule that encodes a protein comprising the amino acid sequence of SEQ ID NO: 623.
7. The substantially purified nucleic acid molecule of claim 6, wherein the nucleic acid molecule comprises the nucleic acid sequence of SEQ ID NO: 2.
- 20 8. A substantially purified nucleic acid molecule that specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 2 or its complement, wherein the nucleic acid molecule encodes a protein comprising the amino acid sequence of SEQ ID NO: 623.
9. The substantially purified nucleic acid molecule according to claim 8, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 2 or its complement under high stringency conditions.
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10. The substantially purified nucleic acid molecule according to claim 8, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 2 or its complement under low stringency conditions.

11. A substantially purified nucleic acid molecule that encodes a protein comprising the
5 amino acid sequence of SEQ ID NO: 624.

12. The substantially purified nucleic acid molecule of claim 11, wherein the nucleic acid molecule comprises the nucleic acid sequence of SEQ ID NO: 3.

13. A substantially purified nucleic acid molecule that specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 3 or its complement, wherein the nucleic acid molecule encodes a
10 protein comprising the amino acid sequence of SEQ ID NO: 624.

14. The substantially purified nucleic acid molecule according to claim 13, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 3 or its complement under high stringency conditions.

15. The substantially purified nucleic acid molecule according to claim 13, wherein said
15 nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 3 or its complement under low stringency conditions.

16. A substantially purified nucleic acid molecule that encodes a protein comprising the amino acid sequence of SEQ ID NO: 625.

17. The substantially purified nucleic acid molecule of claim 16, wherein the nucleic acid
20 molecule comprises the nucleic acid sequence of SEQ ID NO: 4.

18. A substantially purified nucleic acid molecule that specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 4 or its complement, wherein the nucleic acid molecule encodes a protein comprising the amino acid sequence of SEQ ID NO: 625.

19. The substantially purified nucleic acid molecule according to claim 18, wherein said
25 nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 4 or its complement under high stringency conditions.

20. The substantially purified nucleic acid molecule according to claim 18, wherein said nucleic acid molecule specifically hybridizes to a nucleic acid sequence of SEQ ID NO: 4 or its complement under low stringency conditions.

21. A substantially purified nucleic acid molecule comprising a nucleic acid sequence which encodes a plant HES1 protein.

22. A substantially purified protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 622, 623, 624, and 625.

23. An antibody capable of specifically binding a protein with the amino acid sequence of SEQ ID NO: 622.

24. An antibody capable of specifically binding a protein with the amino acid sequence of SEQ ID NO: 625.

25. A transformed plant having a nucleic acid molecule which comprises:

(A) an exogenous promoter region which functions in a plant cell to cause the production of a mRNA molecule; which is linked to

(B) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid sequence encoding a protein having an amino acid sequence selected from the group consisting of SEQ ID NO: 622 through SEQ ID NO: 626 or fragment thereof; which is linked to

(C) a 3' non-translated sequence that functions in the plant cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of the mRNA molecule.

26. The transformed plant according to claim 25, wherein said structural gene is in the antisense orientation.

27. The transformed plant according to claim 25, wherein said plant is selected from the group of rapeseed, maize, soybean, safflower, sunflower, cotton, peanut, flax, oil palm and Cuphea.